

THE WEATHER ELEMENTS

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PRESSURE AND WINDS

The movement of cyclones and anticyclones assumed the lessened activity, as compared with the months immediately preceding, common to the midspring month. Sharp changes in atmospheric pressure were notably absent and the pressure gradients were usually slight, though at Havre, Mont., the sea-level pressure on the 23d, 29.20 inches, was the lowest of record in April for that station. As the pressure was low over the entire Northwest on that date, the gradients were moderate in all directions, and no widespread severe winds were experienced, though remarkably heavy snow fell over portions of southwestern Montana. In general the anticyclones were shallow, and though some of them maintained well-defined courses across the country, the rainfall resulting therefrom was usually confined to narrow limits and was rarely heavy.

The principal anticyclone appeared over the Hudson Bay region on the morning of the 20th and gradually overspread the northeastern States during the following two days, causing the most important fall in temperature over the Atlantic coast districts experienced during the month. Other anticyclones were mainly unimportant and were confined largely to the regions from the Great Lakes eastward, except that occurring early in the first decade, which moved into the United States from the Canadian Northwest and developed considerable importance as a weather-controlling factor from the Great Lakes eastward about the 4th to 6th, though temperature falls were less pronounced than would ordinarily be expected.

The average atmospheric pressure was slightly higher than normal from the Missouri Valley eastward to the Atlantic coast, including the Canadian Maritime Provinces, and also over small areas near the West Gulf coast and locally in the vicinity of southern California. Elsewhere the average pressure was moderately below normal.

Compared with the preceding month, the pressure was lower by considerable amounts over all parts of the United States and Canada save for a small area in the Lake Superior region.

The highest average pressure covered the upper Lake region, a condition usually existing in April. The pressure gradients were mainly small and therefore exerted no marked effect upon the wind circulation. As a consequence the prevailing winds varied materially at near-by points, but on the whole they were from southerly points over the interior and southern districts.

Local storms were reported at some point in the country on nearly every day, but they were not severe over wide areas, though they were rather numerous on the 18th to 20th from Kansas and Nebraska eastward to the central Appalachian Mountain region.

TEMPERATURE

The monthly means were for the third consecutive month above the normal in practically all parts of both the United States and Canada, and for the fourth consecutive month over the interior and Northwest; they were the highest ever observed in April at many points in the South from Texas eastward; and the maximum temperatures were the highest ever observed in April over much of the country from the Mississippi River eastward and in portions of the Southern Plains.

The first few days of the month were moderately cool over the Southeast and freezing temperatures occurred locally in the northern portions of the East Gulf States and the western parts of the Carolinas. At the same time the lowest temperatures of the month were reported in portions of the far Southwest, where, at exposed points in the mountains, readings below zero were observed.

Following this cool spell the day-to-day changes were small and temperatures were mainly above normal until the 20th and 21st, when sharp falls occurred from the Ohio Valley and Great Lakes region eastward, the minimum temperatures in the interior portions of the Middle Atlantic States and over much of New England falling materially below freezing. Damaging frosts occurred in in these sections.

Decidedly cooler weather overspread the southern portions of the Rocky Mountain and Plateau regions on the 23d and 24th, when the lowest temperatures of the month occurred at points in Arizona and near-by States.

Near the end of April cool weather overspread most districts from the Rocky Mountains eastward and at the close the lowest temperatures of the month were prevailing in portions of the Great Plains.

The excess of temperature in April over so large a part of the North American Continent, the only exceptions being the extreme southern part of Florida and locally in the lower St. Lawrence Valley, coupled with similar conditions during February and March preceding, forms a three-month period of excess in temperature that, for extent of territory covered and amount of excess, has not been experienced in more than 50 years. The maximum temperatures reached or passed 90° in nearly all the States and exceeded 100° in some cases, the highest, 107°, occurring in Texas. The dates of highest readings were confined mainly to the latter part of the second and early part of the third decade, over the districts east of the Rocky Mountains, the 23d and 24th being particularly warm, when the readings over many sections east of the Mississippi and in the Southern Plains exceeded any previous record for April.

The lowest temperatures were observed mainly during the first few days of the month in the Southern and Central States, though they occurred on the 6th and 7th over portions of the Middle Atlantic States, on the 21st in New York and New England, and on the 28th to 30th over the Great Plains.

PRECIPITATION

The cyclones of the month were attended by unusually light precipitation as a rule and the accompanying precipitation areas were likewise small. As a result precipitation was deficient, as has been the case for several months, over much of the country from the Rocky Mountains eastward. This was particularly the case from the Mississippi River eastward, where the State averages were uniformly below the normal.

Between the Mississippi River and Rocky Mountains there were slight excesses in Missouri, Kansas, Oklahoma, and along the northern boundary, but deficiencies continued in the other States. West of the Rockies the precipitation was mainly slightly above the April average.

In the West Gulf States the deficiency was large and, as this condition had existed for several months, the need of more rain at the end of the month was very great, particularly along the coast. In Louisiana the precipitation was the least of record for April, and the three-months' period, February to April, inclusive, was likewise the driest of record. In Texas the long drought was

partly broken, but dry weather continued in New Mexico and Colorado where the lack of water is becoming serious.

In California favorable rains occurred over most of the State, and in some localities the month was decidedly rainy for the close of the wet season.

SNOWFALL

From the Rocky Mountains eastward the snowfall was confined to local small areas, though some unusual falls were reported.

In northern New York and New England one of the heaviest snowfalls of record occurred on the 19th and 20th, when depths up to 10 or 15 inches were reported. In portions of the upper Mississippi Valley and upper Lake region there were some unusual falls on the 28th and 29th.

In the western mountain districts more than the usual amount of snow occurred in California, but, on account of high temperatures, it soon melted at the lower elevations, and it is estimated the run-off from melting snow in that State will be exhausted earlier than usual.

In the other Mountain States there was less than the normal snowfall generally for April over New Mexico, Colorado, and Utah, while to the northward the amounts were more nearly normal. In Montana an unusually heavy fall of snow occurred on the 23d over the southwestern and some western portions, some stations reporting as much as 20 inches or more.

RELATIVE HUMIDITY

Relative humidity was less than normal over nearly all portions of the country. This was partly due, no doubt, to the general excess of temperature. The atmosphere was unusually dry in portions of the Great Lakes, Gulf States, and Rocky Mountain regions.

SUNSHINE AND CLOUDS

There was a good percentage of sunshine in all parts of the country, save in the far Northwest, though in California and other parts of the Southwest the percentages of the possible were in many cases less than normal.

SEVERE LOCAL HAIL AND WIND STORMS, APRIL, 1925

[The table herewith contains such data as have been received concerning severe local storms that occurred during the month. A more complete statement will appear in the Annual Report of the Chief of Bureau]

Place	Date	Time	Width of path ¹	Loss of life	Value of property destroyed	Character of storm	Remarks	Authority
East-central and southeastern Wyoming.	1-2				\$25,000	High wind and snow.	Heavy damage to light and power lines.	Wyoming Tribune Leader (Cheyenne, Wyo.). Official, U. S. Weather Bureau.
Vicksburg, Miss. (near)	3	P. m.				Hail.	Considerable damage to fruit trees, truck, and windows.	Do.
Greenwood, Fla. (near)	4	2-3 p. m.	880		2,000	do.	Corn stripped; cotton killed in places.	Do.
Miami, Fla. (near)	5	1-2 p. m.	100	5	300,000	Tornado and hail.	Severe damage to auto tops and other exposed property; minor damage to crops; 35 persons injured. Path 12 miles long.	Do.
Hilliard, Fla.	6	3 p. m.	3-4 mi.			Heavy hail.	Vegetables and foliage injured.	Do.
Clarksdale, Mo. (near)	7	5 p. m.		1		Thunderstorm.	1 death by lightning; no property damage reported.	Do.
Perkins, Okla.	8	2:30 p. m.				Tornado.	Minor property damage.	Do.
Addington Bend, Okla.	8	3:30 p. m.			10,000	do.	Considerable property damage.	Do.
Madill, Okla.	8	5:30 p. m.		1	5,000	do.	3 persons injured; slight property damage.	Do.
Caryville, Fla. (near)	8	3-4 p. m.				Heavy hail.	Crops damaged but extent not known.	Do.
Republic, Mo., and vicinity.	8	7:15 p. m.	880		5,000	Severe hail.	Damage chiefly to orchards.	Do.
Parts of Grayson, Fannin, Lamar, and Titus Counties, Tex.	8	3-8 p. m.			66,000	do.	Heavy damage to crops and buildings.	Do.
Thackerville, Okla.	8	4 p. m.	3 mi.			Heavy hail.	Fruit total loss; crops suffer severely; 3,000 acres of corn will have to be replanted. Path 5 miles long.	Do.
Holdenville, Okla.	8	4:15 p. m.			4,000	do.	Fruit considerably injured.	Do.
Dayton, Ohio, and vicinity.	9	3:30 p. m.				Wind.	General damage about the city and in the vicinity; 2 persons injured.	Herald (Dayton, Ohio).
Christian County, Ky. (eastern part of).	9	4 p. m.	1,760			Thunderstorm and hail.	Skylights and roofs in Pembroke damaged; loss of merchandise by rain. Other minor damage.	Official, U. S. Weather Bureau.
Ideal, Montezuma, Greystone and Buckhead, Ga.	10	12:30-2:15 p. m.			100,000	Heavy hail.	Peach orchards, cotton, and corn severely damaged.	Do.
Central Calumet County, Wis.	10-11	About midnight.	Few—880		4,000	Tornado.	Two barns and several outbuildings demolished.	Do.
Alva, Okla. (4 miles west of Springfield, Ill., and vicinity).	12	8:30 p. m.	3-7 mi.			Hail.	Much damage to fruit.	Do.
	13	2 p. m.			16,000	High wind.	Roofs, windows, signs, auto tops, etc., damaged; 8 persons injured.	Do.
Sullivan, Ind.	13	5:30 p. m.				Tornadoic wind.	A number of buildings unroofed.	Do.
Kokomo, Ind.	13	6 p. m.				Tornado.	About 12 houses unroofed; several barns moved.	Do.
Plymouth, Ind. (near)	13	do.				Wind.	Several roofs torn off.	Do.
St. Joseph County, Ind.	13	P. m.			10,000	do.	Considerable property damage.	Do.
Ft. Wayne, Ind.	13	7 p. m.				do.	Damage to buildings throughout city.	Do.
Carbondale, Kans.	14	P. m.				Violent wind.	Many porches blown off; trees wrecked.	Do.
Condon, Oreg.	15	P. m.			10,000	Small tornado.	Much damage to warehouses and other buildings.	Do.
Chicopee, Mass.	15					Tornadoic wind.	House and 5 garages destroyed.	Hartford Times (Conn.).
Sunnyside, Wash., and vicinity.	16	4-4:15 p. m.	5 mi.		5,000	Heavy hail.	Some crops damaged; windows broken.	Official, U. S. Weather Bureau.
Howard County, Nebr.	18	2 a. m.				Hail.	Fruits and early vegetables injured; windows broken and roofs damaged.	Do.
South central and southeastern, Wis.	18	9 a. m. to midnight.				Heavy hail and severe squalls.	Silos blown down, buildings unroofed, plate glass windows broken. No damage by hail.	Do.
Long Creek, N. C.	18	3-3:45 p. m.	1,760		2,000	Hail.	Damage principally to strawberries. Path 6 miles long.	Do.
Dodge City, Kans. (near)	18	5 p. m.	2 mi.		4,000	Severe hail.	Crops not sufficiently advanced to suffer much; auto tops injured; minor damage to other property.	Do.
Humboldt and Wright Counties to Winneshiek, Howard and Mitchell Counties, Iowa.	18					do.	Damage consisted chiefly of broken windows, punctured roofs, and injured fruit.	Do.
Carroll County, Ill.	18	P. m.				Hail and wind.	Farm buildings damaged; roof blown from schoolhouse; minor damage at various points.	Do.

¹ Yards when not otherwise specified; "mi." signifies miles.